UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/764,725	01/17/2001	Richard L. Maliszewski	42390P6532C	8454

8791   7590   12/21/2005

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1030

EXAMINER
KISS, ERIC B

ART UNIT	PAPER NUMBER
2192	

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/764,725	MALISZEWSKI, RICHARD L.
	Examiner	Art Unit	
	Eric B. Kiss	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>26 September 2005</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1,3-5,7-9 and 11-16</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1,3-5,7-9 and 11-16</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All   b) ☐ Some * c) ☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 26 September 2005 has been entered. Claims 1,

3-5, 7-9, and 11-16 are pending.

Response to Arguments

2.   Applicant's arguments with respect to claims 1, 3-5, 7-9, and 11-16 have been considered

but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3.   The text of those sections of Title 35, U.S. Code not included in this action can be found

in a prior Office action.

4.   Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over

International Publication No. WO 97/04394 to Drake in view of U.S. Patent No. 5,495,612 to

Hirayama et al.

As per claim 13, Drake discloses transferring control to a software test module (netsafe1)

when a second instruction having an instruction address in the instructions is executed by a data

processing device, the second instruction replacing a non-identical first instruction comprising a

target address (see, for example, page 16, lines 20-32), the first instruction to invoke a function

or procedure (the designated Part B, 94 in Fig. 9, is part of code area 72 which contains the

machine instructions for operation on the x86 microprocessor; see p. 15, lines 36-38 and p. 16, lines 20-25), and the first instruction comprising more bytes than the second instruction (the designated Part B, 94 in Fig. 9, is specifically chosen because it is greater in size than the "netsafe 1 code"; see p. 16, lines 22-25);

Drake further discloses setting an execution address to the target address if test results produced by a test module (netsafe1) indicate the instructions are to proceed (see, for example, page 15, lines 8-11; and page 17, line 21, through page 18, line 27; see further, p. 19, line 20— control passes to the original start address of the executable program after the decryption process following the success of the security checks of netsafe1). Drake fails to explicitly disclose storing the target address in a table. However, Hirayami et al. teach storing an original target address in a table for replacing a code portion with a previous code portion (see, for example, col. 12, lines 19-54). Therefore, it would have been obvious to one of ordinary skill in the computer art at the time the invention was made to modify the invention of Drake to include the use of a table to store a target address. One would be motivated to do so to facilitate efficient entry point replacement.

As per claim 14, Drake further discloses loading the test module (see, for example, page 15, lines 8-11).

As per claim 15, Drake further discloses the test module comprising instructions to set an exception handler to transfer control to the test instructions when the second instruction is executed by the data processing device (see, for example, page 19, lines 14-18).

As per claim 16, Drake further discloses the test module comprising instructions moved from the instructions, the instructions moved to make room in the instructions for the instructions to load the test module (see, for example, page 16, lines 26-32).

5.   Claims 1, 3-5, 7-9, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over International Publication No. WO 97/04394 to Drake in view of U.S. Patent No. 5,495,612 to Hirayama et al. and further in view of U.S. Patent No. 5,966,541 to Agarwal.

As per claims 1, 5, and 9, *Drake* discloses generating a software test module to produce a test result by performing a test on instructions (see, for example, page 14, line 34, through page 15, line 5; and page 16, line 6, through page 17, line 23); in the instructions, replacing a first instruction comprising a target address, the first instruction to invoke a function or procedure (the designated Part B, 94 in Fig. 9, is part of code area 72 which contains the machine instructions for operation on the x86 microprocessor; see p. 15, lines 36-38 and p. 16, lines 20-25), and the first instruction comprising more bytes than the second instruction (the designated Part B, 94 in Fig. 9, is specifically chosen because it is greater in size than the "netsafe 1 code"; see p. 16, lines 22-25), with a second non-identical instruction having an instruction address in the instructions, the second instruction to transfer control to the test module (see, for example, page 16, lines 20-32).

Drake further discloses setting an execution address to the target address if the test result indicates the instructions are to proceed (see, for example, page 15, lines 8-11; and page 17, line 21, through page 18, line 27; see further, p. 19, line 20—control passes to the original start address of the executable program after the decryption process following the success of the

security checks of netsafe1). Drake fails to explicitly disclose storing the target address in a

table. However, Hirayami et al. teach storing an original target address in a table for replacing a

code portion with a previous code portion (see, for example, col. 12, lines 19-54). Therefore, it

would have been obvious to one of ordinary skill in the computer art at the time the invention

was made to modify the invention of Drake to include the use of a table to store a target address.

One would be motivated to do so to facilitate efficient entry point replacement.

Drake further fails to expressly disclose compacting the instructions to eliminate a hole

created by replacing the first instruction with the second instruction. However, Agarwal teaches

that it is known to shift a set of instructions in conjunction with the act of inserting or removing

an instruction (see, for example, column 7, lines 20-26; note that replacing an instruction is the

equivalent of inserting a new instruction and deleting an old instruction). Therefore, it would

have been obvious to one having ordinary skill in the computer art at the time the invention was

made to modify the invention of Drake to include compacting instructions to eliminate a hole

created by replacing an instruction. One would be motivated to do so to prevent invalid op

codes, as an artifact of a replaced instruction, from remaining in a set of instructions.

As per claims 3, 7, and 11, *Drake* further discloses corresponding the target address with

the instruction address in the encrypted table (see, for example, page 18, line 28, through page

19, line 6).

As per claims 4, 8, and 12, *Drake* further discloses profiling the instructions to identify

the first instruction as an instruction to replace (see, for example, page 16, lines 20-25).

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7.   Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric B. Kiss whose telephone number is (571) 272-3699. The Examiner can normally be reached on Tue. - Fri., 7:00 am - 4:30 pm. The Examiner can also be reached on alternate Mondays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Tuan Dam, can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature should be directed to the TC 2100 Group receptionist: 571-272-2100.

EBK /ʄ₩
December 15, 2005

TUAN DAM
SUPERVISORY PATENT EXAMINER